DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: SARGENT LAKE	Lake Area (ha):	14.20
Town: BELMONT	Maximum depth (m):	3.0
County: Belknap	Mean depth (m):	1.2
River Basin: Merrimack	Volume (m³):	430500
Latitude: 43°27'02" N	Relative depth:	0.4
Longitude: 71°26'15" W	Shore configuration:	1.00
Elevation (ft): 764	Areal water load (m/yr)	: 6.50
Shore length (m): 2100	Flushing rate (yr^{-1}) :	5.30
Watershed area (ha): 493.4	P retention coeff.:	0.61
<pre>% watershed ponded: 6.6</pre>	Lake type: natura	l w/dam

BIOLOGICAL:	5 February 2003	25 July 2002
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 65%	SPARSE - NO DOMINANT
#2		(DETRITUS COMMON)
#3	(ALL ALGAE SPARSE)	
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		3.67
DOM. ZOOPLANKTON (% TOTAL) #1	POLYARTHRA 40%	NAUPLIUS LARVA 64%
#2	ROTIFER SPP. 32%	
#3		
ROTIFERS/LITER	143	17
MICROCRUSTACEA/LITER	27	87
ZOOPLANKTON ABUNDANCE (#/L)	170	109
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		2.8
BOTTOM DISSOLVED OXYGEN (mg/L)	6.5	8.5
BACTERIA (E. coli, #/100 ml) #1		53
#2		1
#3		1

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): None

CHEMICAL:			SARGENT I BELMONT	LAKE	
	5 Febru	uary 2003	25	July 2002	****
DEPTH (m)	1.5		1.5		2.5
pH (units)	6.0		6.4		6.4
A.N.C. (Alkalinity)	5.8		4.6		4.4
NITRATE NITROGEN	0.10		< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	< 0.25				
TOTAL PHOSPHORUS	0.005		0.028		0.012
CONDUCTIVITY (µmhos/cm)	96.5		77.8		77.9
APPARENT COLOR (cpu)	17				
MAGNESIUM			0.86		
CALCIUM			< 1.0		
SODIUM			8.8		
POTASSIUM			0.51		
CHLORIDE	17		15		15
SULFATE	6		5		5
TN : TP					
CALCITE SATURATION INDEX					

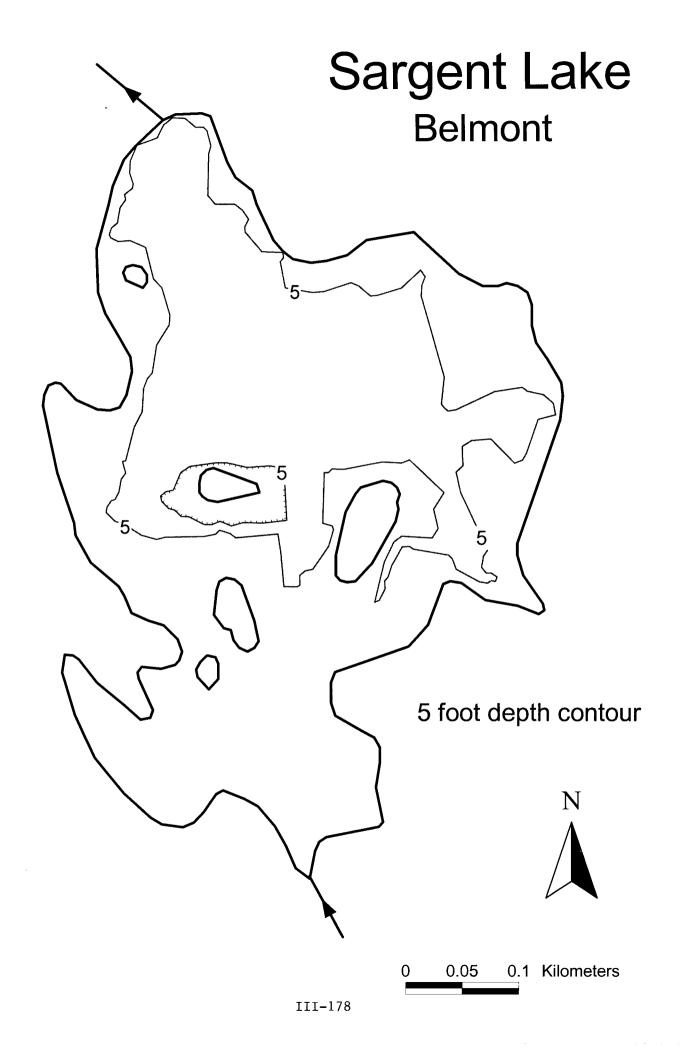
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2002

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	3	0	6	Meso.

COMMENTS:

- 1. aka Sargent Reservoir.
- 2. Previously surveyed in 1983; no change in trophic class.
- 3. Summer net phytoplankton was very sparse but plant detritus was common.



FIELD DATA SHEET

LAKE: SARGENT LAKE TOWN: BELMONT

DATE: 07/25/2002 WEATHER: Sunny & warm; light breeze

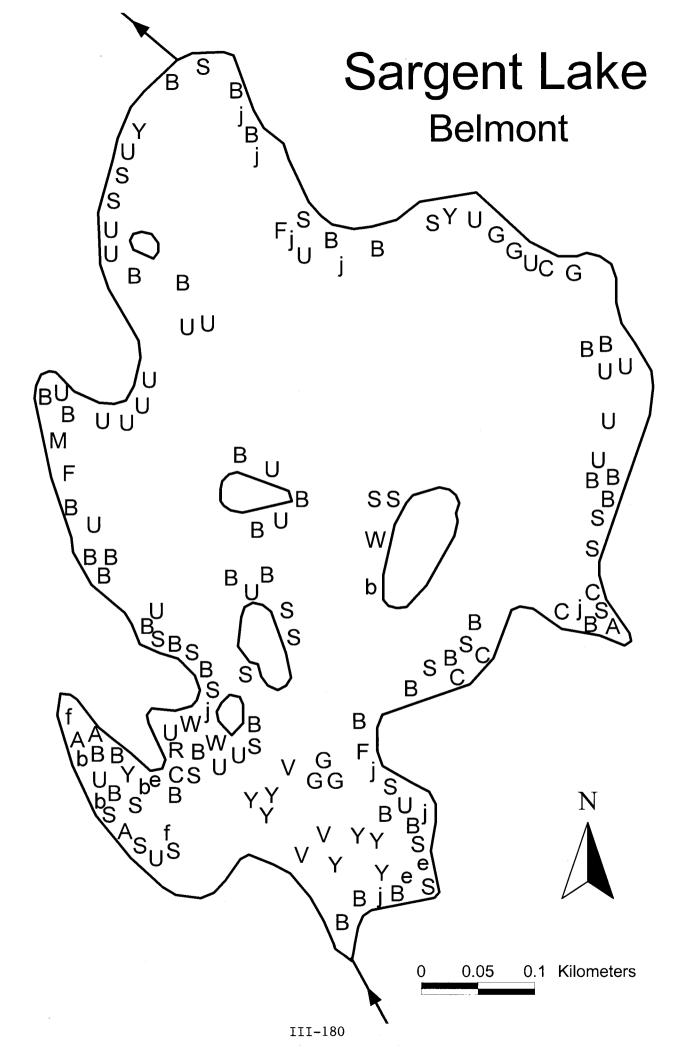
	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	26.2	8.5	104 %
	1.0	25.9	8.5	102 %
	1.5	25.8	8.5	102 %
	2.0	25.1	8.4	101 %
	2.5	24.8	8.5	100 %
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				2-,1-2

SECCHI DISK (m): 2.8 COMMENTS:

BOTTOM DEPTH (m): 3.0

TIME: 1300

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: SARGENT LAKE	rown: Belmont	DATE: 07/25/2002				
Key	PLANT NAME						
vea	GENERIC	COMMON	ABUNDANCE				
S	Sparganium	Bur reed	Scattered				
В	Brasenia schreberi	Water shield	Common				
j	Najas	Bushy pondweed	Common				
Y	Nuphar	Yellow water lily	Scattered				
ט	Utricularia	Bladderwort	Common				
M	Myriophyllum humile	Water milfoil	Sparse				
F	Nymphoides cordatum	Floating heart	Sparse				
W	Potamogeton	Pondweed	Scat/Common				
R	Carex	Sedge	Sparse				
е	Eleocharis	Spike rush	Sparse				
С	Cyperaceae	Non-flowering sedge	Scattered				
b	Scirpus	Bulrush	Scattered				
A	Sagittaria	Arrowhead	Scattered				
f	Chlorophyceae	Filamentous green algae	Scattered				
V	Scirpus validus	Softstem bulrush	Sparse				
G	Gramineae	Grass family	Scat/Common				
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OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

- 1. Observed one small stand of Acorus (sweet-flag); it is not listed above or depicted on the map.
- 2. Lots of bottom growth in many areas: mostly *Najas*, submerged pondweeds and sterile thread-like leaves.
- Emergent & floating-leafed plants were scattered to common and submerged plants were common to abundant.
- 4. Plants (sterile thread-like leaves) came up on the anchor at the deep spot near the dam. They are likely over much of the bottom and the overall bottom growth is probably more abundant than indicated on the map.